



Moffett Community Housing

Update No. 4

Moffett Field, California

August 2003

Introduction

This is the fourth update about groundwater investigations being conducted by the U.S. Navy at Moffett Community Housing in Mountain View, California. Moffett Community Housing is managed by the U.S. Army and consists of Orion Park, which includes Macon Terrace II and III, and Wescoat Housing, which includes Berry Court

Based on sampling and detailed analysis, the Navy currently believes that the chemicals in the groundwater and air at Moffett Community Housing do not pose an immediate or short-term health risk to the residents. Further air monitoring and evaluation will be conducted to evaluate possible long-term health risks.

and Drive, Wescoat Villagers, and Macon Terrace I. This update outlines the findings of a recently completed Phase 2 Investigation at Moffett Community Housing, also called the Site Characterization and Baseline Human Health Risk Assessment. The goal of the investigation was to see whether chemicals in the groundwater beneath Moffett Community Housing pose a health risk to the residents and to determine whether the source of these chemicals is within the housing area. Information about the next steps in the environmental investigation process at Moffett Community Housing is also provided in this issue.

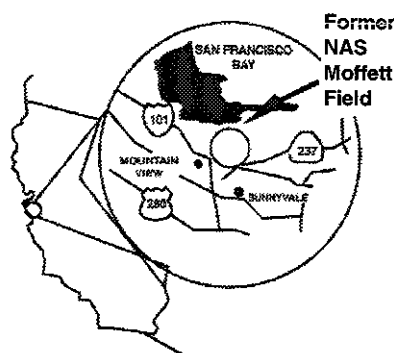


Figure 1 ▲ N

The Navy is conducting an Open House:

**On: August 14, 2003
from 6 to 9 p.m.**

**At: Hilton Garden Inn-Mountain View
840 E. El Camino Real
(see *What's Next* for details)**

Note: Groundwater at Moffett Community Housing is not used for drinking, irrigation or any other domestic use.

Phase 2 Investigation

The Navy conducted the Phase 2 Investigation in 2002 to identify possible risks to residents from

Background

Chemicals were found in the groundwater beneath the eastern portion of Wescoat Housing in 1988 and Orion Park in 1999. The main chemicals in groundwater are Volatile Organic Compounds (VOCs), mainly trichloroethene (TCE) and its breakdown products. TCE is commonly used in industrial cleaners and some household products.

Since groundwater at Moffett Community Housing is not used for drinking, irrigation or other domestic purposes, the chemicals do not pose a risk to residents through direct contact. The Navy assessed the

possibility of indirect exposure due to the VOCs migrating from the groundwater into the air. Navy investigations conducted in 2001 and 2002, using the U.S. Environmental Protection Agency's (EPA) TCE toxicity values at the time (see *EPA's Draft TCE Toxicity Assessment*), indicate that there are no immediate or short-term health risks to residents.

To provide residents with project background information, the Navy and Army provide all Moffett Community Housing groundwater updates at the Moffett Housing Project Office (see *Project Points of Contact* on back page).

EPA's Draft TCE Toxicity Assessment

In December 2002, EPA completed a draft toxicity assessment for TCE. This draft assessment indicates that TCE may pose a higher health risk than previously known for infants, young children, people with chronic diseases and higher background exposures. The TCE levels detected at Moffett Community Housing do not pose an immediate or short-term health risk to the residents.

Since publication of the Navy's Phase 2 Investigation report, EPA Region 9 has been using provisional TCE toxicity values, which are more health protective than those used in the past. These values are still going through a formal approval process and are only provisional at this time.

The Navy will conduct additional investigations at Moffett Community Housing over the next several months to evaluate possible long-term health risks. These investigations will use the provisional TCE toxicity values.

chemicals in groundwater beneath Moffett Community Housing and to see if there are any onsite sources of groundwater contamination. This investigation was conducted based on a workplan reviewed and approved by regulatory agencies including the EPA and Regional Water Quality Control Board (RWQCB), San Francisco Region. The following section outlines the results of the investigation and briefly describes how the conclusions were derived.

Health Risk Study

Sampling – Many samples of soil, groundwater, soil gas, and indoor, outdoor and crawlspace air were collected from areas within Moffett Community Housing to determine if chemicals in groundwater are migrating into the air.

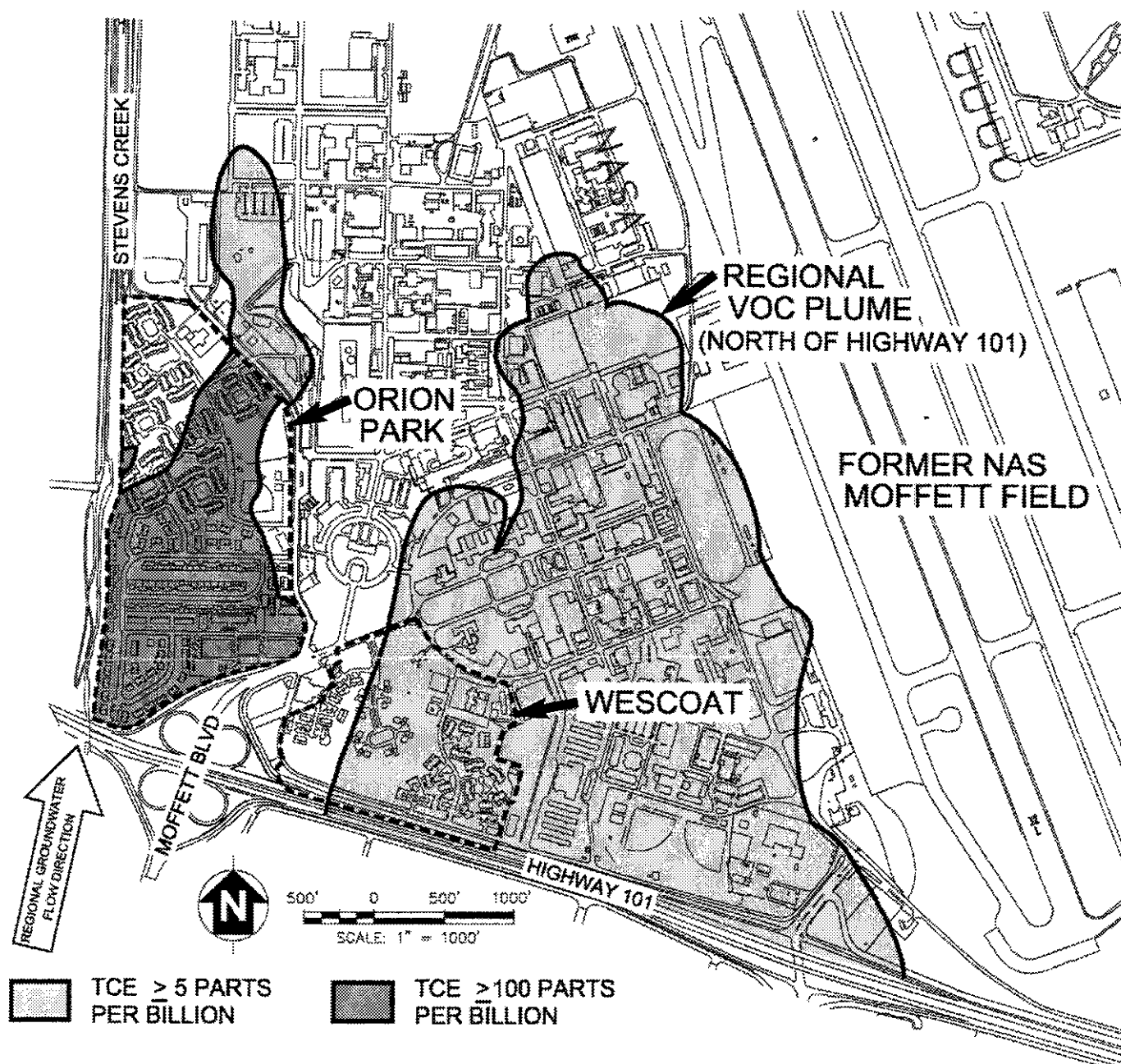
Modeling – The Navy used an EPA-approved computer model that uses site-specific information about the make-up of groundwater and soil to predict how, and if, chemicals in groundwater could migrate into the air. This model was used because TCE in the air can come from sources other than groundwater, such as household products and air emissions in the area.

Findings – The computer model predicted that VOC vapors potentially coming from the groundwater beneath Moffett Community Housing do not pose an immediate or short-term health risk to the residents. However, TCE was detected in the indoor and outdoor air at Moffett Community Housing. While the detected concentrations do not pose an immediate or short-term health risk, additional monitoring will be conducted to further evaluate potential risk.

Sampling results to date indicate that TCE in the air is not originating from the groundwater. This was supported by the fact that no TCE was detected in the indoor or crawlspace air at a sampling location where it was detected in the groundwater. Further, TCE was detected in indoor air at three housing units where it was below reporting limits in the groundwater. Additionally, the majority of VOCs detected in air samples were not detected in the underlying groundwater. This indicates that there may be a VOC source other than groundwater. However, the additional studies will further evaluate whether VOCs in the air are coming from the groundwater.

Conclusion – Based on the available data and the Phase 2 Investigation, the Navy believes that there is no immediate or short-term health risk to the residents at Moffett Community Housing. However, since TCE was detected in the indoor and outdoor air, additional air monitoring and evaluation will be conducted to evaluate possible long-term health risks. The Navy is committed to working with the Army, EPA and the community to address air quality issues at Moffett Community Housing. In fact, in May 2003, the Navy took steps toward improved local air quality by modifying its groundwater treatment systems to eliminate VOC emissions.

Southwest Division Naval Facilities Engineering Command



Sources of Groundwater Contamination

The Phase 2 Investigation report concluded that the primary sources of groundwater contamination are outside Moffett Community Housing. At Orion Park, the highest levels of TCE and its breakdown products were found near the southern and western boundary. Based on regional groundwater flow toward the north-northeast, Navy studies suggest that TCE

and its breakdown products are migrating onto Orion Park from the south and west. The Navy is planning to install groundwater wells at Orion Park to monitor and verify the groundwater flow direction.

At Wescoat Housing, TCE was detected in groundwater along the southern and eastern boundaries. As the above map shows, this contamination is part of the regional VOC plume migrating onto the site.

Southwest Division Naval Facilities Engineering Command

What's Next

The draft Phase 2 Investigation report was released in January 2003. The Navy is currently preparing a final report, which addresses issues raised in regulatory agency and public comments. The final report is scheduled to be available for public review in late summer at the Mountain View Public Library, 585 Franklin Street, Mountain View, California. Concurrently, the Navy is developing plans with the Army for conducting additional investigations to evaluate possible long-term health risks to residents from chemicals in the air.

The Navy will hold an Open House to hear concerns and answer questions about environmental investigations at Moffett Community Housing. The Open House will be held on Thursday, August 14, 2003 from 6 to 9 p.m. at the Hilton Garden Inn, 840 E. El Camino Real, Mountain View, CA 94040. Poster stations will display information about the studies and Navy staff will be available to answer questions. Representatives from EPA and RWQCB will also be present to share information about the steps being taken at a regional level to evaluate potential health risks from the possible migration of TCE in groundwater.

Project Points of Contact

Involving and informing the public is an important part of this project. The Navy's project team is very interested in forming and keeping an open relationship with the residents living in Moffett Community Housing and surrounding communities. If you have questions or concerns, please feel free to contact the following project team members:

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